

Seminario de Probabilidades de Chile

Orador: Guillaume Blanc, EPFL, Suiza.

Título: Random burning of the Euclidean lattice.

Resumen: The burning number of a graph is the minimal number of steps that are needed to burn all of its vertices, with the following burning procedure: at each step, one can choose a point to set on fire, and the fire propagates constantly at unit speed along the edges of the graph. In joint work with Alice Contat, following Mitsche, Prałat and Roshanbin, we consider two natural random burning procedures in the discrete Euclidean torus $\mathbb{T}_n^d$, in which the points that we set on fire at each step are random variables. Our main result deals with the case where at each step, the law of the new point that we set on fire conditionally on the past is the uniform distribution on the complement of the set of vertices burned by the previous points. In this case, we prove that as $n \rightarrow \infty$, the corresponding random burning number (i.e, the first step at which the whole torus is burned) is asymptotic to $T \cdot n^{d/(d+1)}$ in probability, where $T = T(d) \in (0, \infty)$ is the explosion time of a so-called generalised Blasius equation.

El enlace para conectarse al seminario es:

Unirse a la reunión Zoom

<https://reuna.zoom.us/j/84521834914?pwd=OTZ6Y0NWM3pYTGtTbEt3c0luTG96UT09>

ID de reunión: 845 2183 4914

Código de acceso: 997973

**Modalidad híbrida en la sala Maryam Mirzakhani, Torre Norte Piso 6, , Beauchef 851.
Miércoles 05 de Noviembre 2025 a las 16:15 horas.**

